CLAIMS

What is claimed is:

1. A method for operating a proxy cache in a satellite communication system, the method comprising:

demodulating and decoding a satellite uplink to recover a resource information request;

directing the resource information request to a proxy cache; and

when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request.

2. The method of claim 1, further comprising downlinking the resource information request when the proxy cache does not store resource information content associated with the resource information request.

3. The method of claim 1, further comprising receiving responsive resource information content in response to the resource information request, and downlinking the responsive resource information content.

4. The method of claim 3, further comprising storing the responsive resource information in the proxy cache.

5. The method of claim 4, further comprising overwriting existing resource information content with the responsive resource information content.

6. A method for operating a proxy cache in a satellite communication system, the method comprising:

demodulating and decoding a satellite uplink to recover a resource information request;

switching the resource information request from a switch input to a switch outport port coupled to a proxy cache; and

when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request.

7. The method of claim 1, wherein recovering comprises recovering a Uniform Resource Locator from the satellite uplink.

8. A method for operating a proxy cache in a satellite communication system, the method comprising:

demodulating and decoding, using at least one of block decoding and convolutional decoding, a satellite uplink to recover a resource information request;

directing the resource information request to a proxy cache; and

when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request.

9. A method for operating a proxy cache in a satellite communication system, the method comprising:

demodulating and decoding, by convolution decoding followed by block decoding, a satellite uplink to recover a resource information request;

directing the resource information request to a proxy cache; and

when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request.

10. A processing satellite proxy cache subsystem comprising:

an uplink demodulator and decoder for recovering a resource information request from a satellite uplink;

a proxy cache comprising a cache memory and a processor;

a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache; and

the processor responsive to the resource information request for retrieving resource information content associated with the information request from the cache memory for downlinking.

11. The proxy cache subsystem of claim 10, wherein the cache memory comprises a solid state recorder.

12. The proxy cache subsystem of claim 10, wherein the resource information request is a Uniform Resource Locator.

13. A processing satellite proxy cache subsystem comprising:

an uplink demodulator and decoder for recovering a resource information request from a satellite uplink;

a proxy cache comprising a cache memory and a processor;

a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache; and

the processor responsive to the resource information request for retrieving resource information content associated with the information request from the cache memory for downlinking operable to forward the resource information request through the switch to a satellite downlink when the cache memory does not store resource information content associated with the information request.

14. The proxy cache subsystem of claim 13, wherein the processor is further responsive to store responsive resource information in the proxy cache in response to the resource information request.

15. A processing satellite proxy cache subsystem comprising:

an uplink demodulator and decoder for recovering a resource information request from a satellite uplink;

a proxy cache comprising a cache memory and a processor executing a resource information content replacement algorithm out of a program memory coupled to the processor;

a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache; and

the processor responsive to the resource information request for retrieving resource information content associated with the information request from the cache memory for downlinking

16. A proxy cache for a satellite communication system, the proxy cache comprising:

a resource information content memory;

a processor coupled to the resource information content memory;

a switch output port connection for receiving a resource information request recovered from a satellite uplink; and

a switch input port connection for routing resource information content retrieved by the processor from the resource information content memory to a satellite downlink in response to the resource information request.

17. The proxy cache of claim 16, wherein the resource information content memory is a solid state recorder.

18. The proxy cache of claim 16, wherein the resource information request is a Uniform Resource Locator.

19. A proxy cache for a satellite communication system, the proxy cache comprising:

a resource information content memory;

a processor coupled to the resource information content memory;

a content addressable memory storing pointers into the resource information content memory;

a switch output port connection for receiving a resource information request recovered from a satellite uplink; and

a switch input port connection for routing resource information content retrieved by the processor from the resource information content memory to a satellite downlink in response to the resource information request.

20. The proxy cache of claim 19, wherein the content addressable memory is a Uniform Resource Locator content addressable memory.

21. The proxy cache of claim 19, wherein the content addressable memory is an IP address content addressable memory.

22. The proxy cache of claim 19, wherein the content addressable memory is a ATM content addressable memory.

23. The proxy cache of claim 22, wherein the ATM content addressable memory is addressed according to at least one of VPI and VCI.